

## **REMARKS**

Claims 20-39 and 41-71 are pending in the above-captioned patent application after this amendment. Claims 1-49 have been rejected. The Applicant respectfully disagrees with the rejection of claims 1-49. However, the Applicant has amended claims 20, 36, 41, 42, 44, 46 and 47, canceled claims 1-19 and 40 without prejudice, and added new claims 50-71 with this amendment for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office (65 Fed. Reg. 54603), and/or to clarify what the Applicant regards as the present invention.

Support for the amendments to claims 20, 36, 41, 42, 44, 46 and 47 can be found throughout the originally filed specification. In particular, support for the amendments to claims 20, 36, 41, 42, 44, 46 and 47 can be found in the specification at page 15, line 30 through page 16, line 13, at page 17, line 24 through page 18, line 12, in Figure 3B, and in the originally filed claims.

Support for new claims 50-71 can be found throughout the originally filed specification. In particular, support for the new claims can be found in the specification at page 12, line 21 through page 13, line 16, at page 14, line 29 through page 15, line 7, at page 15, line 24 through page 17, line 2, at page 17, line 24 through page 19, line 19, at page 21, line 19 through page 22, line 2, in Figures 3A-3D and 4B, and in the originally filed claims.

New claim 50 is based on original claim 9 rewritten in independent form. Therefore, because new claim 50 contains only those limitations contained in original claim 9, new claim 50 is not narrower in scope than originally filed claim 9.

No new matter is believed to have been added by this amendment. Reconsideration of the pending application is respectfully requested in view of the above-recited amendments and the arguments set forth below.

### **Rejections Under 35 U.S.C. § 102(b)**

#### **Claims 1-8, 10, 11, 13, 15, 20-23, 26-29, 31, 32 and 36-45**

Claims 1-8, 10, 11, 13, 15, 20-23, 26-29, 31, 32 and 36-45 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,906,261 issued to Ogura et al. ("Ogura et al."). Claims 1-8, 10, 11, 13 and 15 have been canceled without

prejudice with this amendment. Accordingly, the rejection of claims 1-8, 10, 11, 13 and 15 is believed to be moot. Further, the Applicant respectfully submits that the rejection of claims 20 and 36, as amended, is unsupported by the art and should be withdrawn.

More particularly, the Examiner contends that Ogura et al. discloses in Figure 1, a circulation system for a mover, the circulation system comprising: a fluid source (12) that directs a first fluid (28) into a first inlet (36) and a second fluid (water) into a second inlet (110), the fluid source (12) including a first conduit (102) that transports the first fluid (28) and a second conduit (106) that transports the second fluid, wherein at least a portion of the second conduit (106) is encircled by the first conduit (102), and wherein a temperature of the second fluid at the second inlet (110) is different than a temperature of the first fluid (28) at the first inlet (36).

The Applicant provides that the embodiment illustrated in Figure 1 of Ogura et al. is directed to a linear motor type acceleration apparatus comprising an acceleration unit 10 and a condenser unit 100 disposed above the acceleration unit 10. The acceleration unit 10 includes a coolant cylindrical container 12, an electromagnetic winding 22 disposed within the container 12, a cooling medium 28 with a low boiling point provided within the container to immerse the winding 22, a vapor conduit 36 extending from the upper wall of the container 12 to the condenser unit 100, and a liquid conduit 38 extending from the lower wall of the condenser unit 100 to the container 12. The condenser unit 100 includes a cylindrical container 102, and a cooling pipe 106, with a coolant such as water circulating there through, helically wound around a central tubular member 104 and having one end portion 110 extended and sealed through an end wall of the container 102. In operation, the stator winding 22 generates heat that is effective for boiling the cooling medium 28 within the container 12 to form a vapor. The vapor then enters the container 102 of the condenser unit 100 through the vapor conduit 36 and contacts the cooling pipe 106, which causes the cooling medium 28 to be liquidized before it is then returned to the container 12 through the liquid conduit 38. (Ogura et al. column 3, line 14 through column 4, line 37, and in Figure 1).

However, in the embodiment illustrated in Figure 1, Ogura et al. does not disclose a method for controlling the temperature of a mover combination including the steps of providing a mover having a conductor component, a first inlet, and a second inlet;

controlling the temperature of a first fluid at the first inlet with a first temperature adjuster; and controlling the temperature of a second fluid at the second inlet with a second temperature adjuster, wherein the temperature of the first fluid at the first inlet is different than the temperature of the second fluid at the second inlet. In Ogura et al., the stator winding 22 heats the cooling medium 28 to form a vapor. However, Ogura et al. provides no additional mechanism to *control* the temperature of the cooling medium 28 at the opening of the vapor conduit 36. Additionally, Ogura et al. does not disclose a first conduit that transports the first fluid toward the first inlet and a second conduit that transports the second fluid toward the second inlet, wherein the first conduit encircles at least a portion of the second conduit. In Ogura et al, the vapor conduit 36 does not encircle at least a portion of the end portion 110 of the cooling pipe 106.

In distinction to Ogura et al., amended claim 20 of the present application recites “(a) circulation system ... comprising: a fluid source that directs a first fluid into the first inlet and a second fluid into the second inlet, the fluid source including a first conduit that transports the first fluid toward the first inlet and a second conduit that transports the second fluid toward the second inlet, wherein at least a portion of the second conduit is encircled by the first conduit.”

Because Ogura et al. does not disclose all of the elements of amended claim 20, the § 102(b) rejection is unsupported by the art and should be withdrawn. Because claims 21-23, 26-29, 31 and 32 depend either directly or indirectly upon amended claim 20, the rejection of claims 21-23, 26-29, 31 and 32 under 35 U.S.C. § 102(b) is also unsupported by the art and should be withdrawn.

Further, in distinction to Ogura et al., amended claim 36 of the present application recites “(a) method for controlling the temperature of a mover combination ... comprising the steps of: providing a mover having a first inlet, a second inlet, a conductor component and a magnet component; directing a first fluid from a fluid source into the first inlet; directing a second fluid from the fluid source into the second inlet; controlling a temperature of the first fluid at the first inlet with a first temperature adjuster; controlling a temperature of the second fluid at the second inlet with a second temperature adjuster, wherein the temperature of the second fluid at the second inlet is different than the temperature of the first fluid at the first inlet.”

Because Ogura et al. does not disclose all of the elements of amended claim 36, the § 102(b) rejection is unsupported by the art and should be withdrawn. Because claims 37-45 depend either directly or indirectly upon amended claim 36, the rejection of claims 37-45 under 35 U.S.C. § 102(b) is also unsupported by the art and should be withdrawn.

### **Rejections Under 35 U.S.C. § 103(a)**

#### **Claims 9 and 30**

Claims 9 and 30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogura et al. in view of U.S. Patent No. 3,318,253 issued to Campolong ("Campolong"). Claim 9 has been canceled without prejudice with this amendment. Accordingly, the rejection of claim 9 under 35 U.S.C. § 103(a) is believed to be moot. However, claim 50 has been added with this amendment, which, as noted above, is based on claim 9 rewritten in independent form. The Applicant respectfully traverses the rejection of claim 50. Further, the Applicant respectfully submits that the rejection of claim 30 after the amendment to claim 20 herein is improper and should be withdrawn.

The Examiner contends that Ogura et al. shows all of the limitations of claim 9 except for the conductor component including a conductor array, wherein the first passageway encircles at least a portion of the conductor array and the conductor array encircles at least a portion of the second passageway. The Examiner further contends that Campolong shows the first passageway encircling at least a portion of the conductor array (42) and the conductor array encircling at least a portion of the second passageway (35).

The Applicant respectfully submits that the proposed combination is inoperable. Stated in another fashion, there is no reasonable means by which to combine Ogura et al. and Campolong to result in the first passageway encircling at least a portion of the conductor array and the conductor array encircling at least a portion of the second passageway. Ogura et al. discloses two separate containers, one container 12 that is part of the acceleration unit 10 and another container 102 that is part of the condenser unit 100. The second fluid in the second passageway 106, which must be encircled by at least a portion of the conductor component 22, is used to directly cool the first fluid, the cooling medium 28, that must be in fluid communication with the first passageway, which must

encircle at least a portion of the conductor component 22. The proposed combination of Ogura et al. and Campolong simply does not provide a manner by which the cooling medium 28 that is heated to a vapor as it surrounds the conductor component 22 can be effectively condensed back into liquid form by the second fluid that flows through the cooling pipe 106 that must be encircled, at least in part, by the conductor component 22 that is heating the cooling medium 28.

Further, there is no incentive provided in the cited references to combine the references to achieve the elements and limitations as claimed in the present invention. It is well-established that even if the combination of references teach every element of the claimed invention, without a motivation to combine the specific teachings, an obviousness rejection is improper.

In distinction to the cited combination of references, claim 50 recites “(a) mover combination comprising: a mover having a magnet component, a conductor component including a conductor array, a first passageway including a first inlet, and a second passageway including a second inlet, wherein the first passageway encircles at least a portion of the conductor array and the conductor array encircles at least a portion of the second passageway; and a circulation system including a fluid source that directs a first fluid to the first inlet and a second fluid to the second inlet, wherein a temperature of the first fluid at the first inlet is different than a temperature of the second fluid at the second inlet, and wherein the first inlet is in fluid communication with the first passageway and the second inlet is in fluid communication with the second passageway.”

Accordingly, the Applicant respectfully submits that the § 103(a) rejection of claim 50 is unsupported by the art and should be withdrawn. Because claims 51-56 depend either directly or indirectly upon claim 50, they are also believed to be patentable over the cited references.

Further, as noted above, the rejection of amended claim 20 is unsupported by the art. Claim 30 depends from claim 20. Accordingly, the rejection of claim 30 is unsupported by the art.

### **Claim 12**

Claim 12 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogura et al. in view of U.S. Patent No. 5,434,549 issued to Hirabayashi et al. ("Hirabayashi et al."). Claim 12 has been canceled without prejudice with this amendment. Accordingly, the rejection of claim 12 is believed to be moot.

### **Claims 14, 16-19, 32-35 and 47-49**

Claims 14, 16-19, 32-35 and 47-49 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogura et al. in view of U.S. Patent No. 5,777,403 issued to Yuan ("Yuan").

Claims 14, 16-19, and 40 have been canceled without prejudice with this amendment. Accordingly, the rejection of claims 14, 16-19, and 40 is believed to be moot.

Further, as noted above, the rejection of amended claim 20 is unsupported by the art. Claims 32-35 depend from claim 20. Accordingly, the rejection of claims 32-35 is unsupported by the art.

Still further, as noted above, the rejection of amended claim 36 is unsupported by the art. Claims 47-49 depend from claim 36. Accordingly, the rejection of claims 47-49 is unsupported by the art.

### **Claims 24 and 25**

Claims 24 and 25 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ogura et al. As noted above, the rejection of amended claim 20 is unsupported by the art. Claims 24 and 25 depend from claim 20. Accordingly, the rejection of claims 24 and 25 is unsupported by the art.

### **Remaining New Claims**

New claims 57-71 have also been added with this amendment. New claims 57-71 are of a slightly different scope than the previously pending claims. However, new claims 57-71 are believed to be patentable in view of the cited references.

For example, the Applicant respectfully submits that the cited references do not teach or suggest a mover combination including a mover having a conductor component,

a first inlet, and a second inlet; and a circulation system having a first temperature adjuster that controls the temperature of a first fluid at the first inlet, and a second temperature adjuster that controls the temperature of a second fluid at the second inlet so that the second fluid at the second inlet is different than the temperature of the first fluid at the first inlet.

Additionally, the Applicant respectfully submits that the cited references do not teach or suggest a mover combination including a mover having a conductor component, a first passageway having a first inlet and a second passageway having a second inlet, wherein the first passageway encircles at least a portion of the second passageway and at least one of the first passageway and the second passageway encircles at least a portion of the conductor component; and a circulation system wherein the temperature of a first fluid at the first inlet is different than the temperature of a second fluid at the second inlet.

In contrast to the cited references, new independent claim 57 recites “(a) mover combination comprising: a mover including a first inlet, a second inlet, a conductor component and a magnet component; and a circulation system including: (i) a fluid source that directs a first fluid to the first inlet and a second fluid to the second inlet; (ii) a first temperature adjuster that controls a temperature of the first fluid at the first inlet; and (iii) a second temperature adjuster that controls a temperature of the second fluid at the second inlet so that the second fluid at the second inlet is different than the temperature of the first fluid at the first inlet.”

Because the cited references do not teach or suggest all of the elements of new claim 57, it is believed to be patentable. Because new claims 58-67 depend either directly or indirectly from new claim 57, they are also believed to be patentable.

Further, in contrast to the cited references, new independent claim 68 recites “(a) mover combination comprising: a mover including a conductor component, a magnet component, a first passageway having a first inlet, and a second passageway having a second inlet, wherein the first passageway encircles at least a portion of the second passageway and wherein at least one of the first passageway and the second passageway encircles at least a portion of the conductor component; and a circulation system including a fluid source that directs a first fluid to the first inlet and a second fluid

to the second inlet, wherein a temperature of the first fluid at the first inlet is different than a temperature of the second fluid at the second inlet.”

Because the cited references do not teach or suggest all of the elements of new claim 68, it is believed to be patentable. Because new claims 69-71 depend directly from new claim 68, they are also believed to be patentable.

### Conclusion

In conclusion, the Applicant respectfully asserts that claims 20-39 and 41-71 are patentable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-456-1951 for any reason that would advance the instant application to issue.

Dated this the 5<sup>th</sup> day of March, 2005.

Respectfully submitted,



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